

REMARKS

Claims 1-21 are currently pending in connection with the present application. Claims 1 and 11 having been amended and claims 22 and 23 having been canceled, reconsideration in view of the following remarks kindly requested.

Summary of Interview

Applicants wish to thank Examiner Opsasnick for his time for teleconferencing on September 19, 2005, and November 10, 2005, the contents of which are summarized below. Prior to the telephonic Examiner interviews, Applicants' representative provided discussion points on the merits of claims 21-23, not considered previously. At the interview of September 19, 2005, no agreement was reached as to the allowability of claims 1 and 11, however, the Examiner was receptive to arguments directed to claims 22 and 23, and indicated that a new search would be done on claims 1-21, pending the amendments to claims 1 and 11 to incorporate the subject matter of claims 22 and 23. Accordingly, Applicants have amended independent claims 1 and 11 as discussed during the interview.

On the interview of November 10, 2005, the Examiner explained his reasoning of the Advisory Action dated October 13, 2005 and proposed language that would overcome the art of record given proper arguments distinguishing the claims from the prior art. In particular, the Examiner suggested arguments directed to distinguishing the calculation and selection steps of the independent claims from the teaching of Manjunath (Col. 6, Lines 41-65).

Allowable Subject Matter

In the outstanding Final Office Action, the Examiner failed to address claims 21-23 included in the last amendment. During the Examiner's interview, the Examiner indicated that claims 22 and 23, with clarity amendments, include subject matter that appears to overcome the prior art of record. Claims 1 and 21 have been amended, with the subject matter from these claims, now cancelled and consistent with the discussion with the Examiner.

Prior Art Rejections

35 U.S.C. § 103 Sewall/Manjunath Rejection

Claims 1-20 stand rejected under 35 U.S.C. § 103(b) as being unpatentable over Sewall et al. (U.S. Patent No. 6,708,146) in view of Manjunath et al. (U.S. Patent No. 6,438,518). Applicants respectfully traverses this rejection.

Amended independent claim 1 recites, "calculating a self similarity ratio value, representing a periodicity characteristic, and an autocorrelation coefficient value, representing a spectral characteristic, for an input signal segment, **wherein calculating the self similarity ratio value includes calculating a plurality of different self similarity ratio values and selecting the highest one of the plurality of different self similarity ratio values as the calculated self similarity ratio value**".

Amended independent claim 11 recites, "calculating means for calculating at least one of a self similarity ratio value, representing a periodicity characteristic, and an

¹ The Examiner inadvertently failed to address claim 21-23, as discussed above.

autocorrelation coefficient value, representing a spectral characteristic, for an input signal segment, **wherein calculating the self similarity ratio value includes calculating a plurality of different self similarity ratio values and selecting the highest one of the plurality of different self similarity ratio values as the calculated self similarity ratio value**".

The Examiner admits that Sewall does not disclose or suggest "calculating a self similarity ratio value, representing a periodicity characteristic" as recited in Applicants' claim 1.¹

Manjunath discloses a method for determining whether the frame is unvoiced speech by analyzing the periodicity of the frame.² The periodicity of the frame is measured using either a normalized autocorrelation function or a zero crossing analysis.³ Manjunath discloses that by comparing the detected frame energy 404 of a sample transmission 400 to a **predefined threshold level** to establish whether a given sample contains speech 408.⁴ Thereafter, Manjunath determines whether the frame is unvoiced speech by examining the periodicity of the frame, as determined by methods such as zero crossing or a normalized auto correlation function.⁵

Manjunath does not teach "calculating the self similarity ratio value includes calculating a plurality of different self similarity ratio values and **selecting the highest one of the plurality of different self similarity ratio values** as the calculated self similarity ratio value" as recited in amended, independent claim 1. Instead, Manjunath teaches determining the periodicity value by comparing the frame energy **to a minimum**

¹ Page 2 of Office Action dated June 27, 2005.

² Manjunath, Fig. 4 and col. 6, line 21 - col. 7, line 28.

³ Manjunath, col. 5, line 53.

⁴ Manjunath, col. 6, lines 41-52.

⁵ Manjunath, col. 6, lines 53-60.

threshold value and employing one of either a zero-crossing analysis or a normalized auto correlation function. Manjunath does not teach "**selecting the highest one of the plurality of different self similarity ratio values**" as an element of calculating the calculated self similarity ratio value representative of the periodicity characteristic.

In light of the above, Applicant submits that neither Sewall nor Manjunath, alone or in combination, teach or suggest the features of amended independent claim 1. At least for the reasons discussed above, Applicants submit that claim 11 is also patentable. Furthermore, claims 2-10 and 12-21 are patentable because they derive from amended independent claims 1 and 11, respectively. Therefore, Applicant respectfully requests that the outstanding rejection be withdrawn.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1-21 in connection with the present application is earnestly solicited.

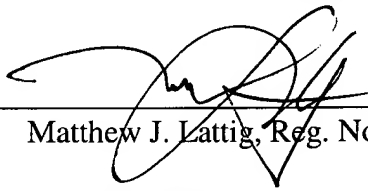
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the telephone number of the undersigned below.

Pursuant to 37 C.F.R. 1.17 and 1.136(a), the Applicants respectfully petition for a two (2) month extension of time for filing a response in connection with the present application, and the required fee of \$450.00 is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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